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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/375,331	08/17/1999	DAVID ZERYCK	1956/116	4894

2101   7590   06/18/2003

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EXAMINER
HOANG, PHUONG N

ART UNIT	PAPER NUMBER
2126	16

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/375,331	ZERYCK ET AL.
	Examiner	Art Unit	
	Phuong N. Hoang	2126	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>02 April 2003</u> .

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>13 - 26</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>13 - 26</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)	4)☐ Interview Summary (PTO-413) Paper No(s). _____ .
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	5)☐ Notice of Informal Patent Application (PTO-152)
3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .	6)☐ Other: ___ .

DETAILED ACTION

Claim Rejections - 35 USC § 102

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 13 – 15, 21 – 23 are rejected under 35 U.S.C. 102(a) as being anticipated by the admitted prior art (APA) page 1 - 2.

As to claim 13, the APA teaches a method for utilizing layered device drivers in a computer system, the method comprising:

emulating a device (emulates a device, page 2, lines 1 – 5) by a device driver, the device having a first device name (inherent);

binding a layered device driver (a LDD is bound, page 2, lines 1 – 5) to the device driver to form a layered device, the layered device having a second device name different than the first device name (each device has a unique name); and

exporting the layered device (LDD exports a device, page 2, lines 1 – 5) under the second device name for use in a layered stack (device driver stack, page 2, lines 1 – 5) .

As to claim 14 and 15, the APA teaches the method of claim 13, wherein the first device name and the second device name are unique (device names are unique) to a particular stage or all stages of re-layering.

As to claim 21, see claim 13 above for emulating and binding. Further, the APA teaches a layered device driver stack which contains many layers including a third device driver.

As to claim 22, see claim 14 above.

As to claim 23, see claim 15 above. As explained in claim 21, the device driver stack can include a fourth device.

Claims 16 – 18, 20, 24 – 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (APA) page 1 – 2 in view of Hyder US Patent no. 6,233,624.

As to claim 16, the APA teaches the layered stack is an input/output stack (device driver stack, page 2, lines 1 – 5).

The APA does not explicitly teach a computer storage system.

Hyder teaches "the current system and method can be used in virtually any computer system having external or physical devices that employ software drivers for interfacing to such external devices" (col. 2, lines 49-53).

It would have been obvious to apply the teaching of Hyder to the APA system because such a system would constitute a storage unit, or storage processor for operation in a storage unit as defined in the applicant's disclosure.

As to claim 17, the APA teaches registering a device driver with an operating system device driver registration system (device driver registration system, p. 2 lines 13 – 16), and registering the device driver with a layered device driver (enables a LDD to be initialized) registration system.

As to claim 18, the APA teaches adding the device driver to a driver list (maintain a driver list, page 2 lines 17 - 22), and specifying a relative position (specifying

the relative position of each LDD with the device driver stack, page 2 lines 12 - 15) for

the device driver within a device driver stack.

As to claim 20, the APA as modified teaches inserting and removing the device

driver at the specified relative position in the device driver stack (Hyder, "Additionally,

the ability of inserting or removing link layer intermediate drivers or layers..." col. 8, lines

48-51).

As to claim 24, see claim 15 above.

As to claim 25 - 26, see claim 17 - 18 above respectively.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over the

admitted prior art (APA) page 1 – 2, in view of Hyder US Patent no. 6,233,624, and

further in view of Petrusha ("Inside the Windows 95 Registry", pages 172-176).

As to claim 19, the APA does not provide the details of how information is stored

in the registry. Petrusha teaches (page 38-39) that the Windows registry comprises

keys that contain value name and value pairs to store information in the registry. It

would therefore be obvious that the registry data as taught by the APA could be stored

using keys, value names and values as described by Petrusha, because Petrusha is

providing further detail of the registry which is being used by the APA. Thus the APA as

modified would store necessary data (driver name, relative position) as values within

one or more keys or subkeys in the registry. Petrusha also teaches the registry as a

single repository for hardware, system software, and application configuration

information (page 11, 2"d paragraph). It would therefore be obvious that information

stored in a driver file and a driver order file as claimed could equivalently be stored in the registry.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong N. Hoang whose telephone number is (703) 605-4239. The examiner can normally be reached on Monday - Friday 9:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (703)305-8498. The fax phone

numbers for the organization where this application or proceeding is assigned are

(703)746-7239 for regular communications and (703)746-7238 for After Final

communications.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is (703)746-

7140.

ph
June 12, 2003

ST. JOHN COURTENAY III
PRIMARY EXAMINER